

1 What is claimed is:

2

3 1 A sound source apparatus having operation blocks composed of  
4 softwares used to compute waveforms for generating a plurality of musical  
5 tones through a plurality of channels according to performance information, the  
6 apparatus comprising:

7 a setting device for setting an algorithm which determines a system  
8 composed of selective ones of the operation blocks systematically combined  
9 with each other to compute a waveform specific to one of the musical tones;

10 a designating device responsive to the performance information for  
11 designating one of the channels to be used for generating said one musical tone;  
12 and

13 a generating device for allocating the selective operation blocks to said  
14 one channel and for systematically executing the allocated selective operation  
15 blocks according to the algorithm so as to compute the waveform to thereby  
16 generate said one musical tone through said one channel.

17

18 2 A sound source apparatus according to claim 1, wherein the setting  
19 device sets different algorithms which determine different systems  
20 corresponding to different timbres of the musical tones, each of the different  
21 systems being composed of selective ones of the operation blocks which are  
22 selectively and sequentially combined with each other to compute a waveform  
23 which is specific to a corresponding one of the different timbres.

24

25 3 A sound source apparatus according to claim 2, wherein the setting  
26 device comprises a determining device that determines a first system

combining a great number of operation blocks and corresponding to a regular timbre and that determines a second system combining a small number of operation blocks and corresponding to a substitute timbre, and a changing device operative when a number of operation blocks executable in the channel is limited under said great number and over said small number due to a load of the computation of the waveform for changing the musical tone from the regular timbre to the substitute timbre so that the second system is adopted for the channel in place of the first system.

10     4     A sound source apparatus according to claim 1, wherein the setting  
11     device comprises an adjusting device operative dependently on a condition  
12     during the course of generating the musical tone for adjusting a number of the  
13     operation blocks to be allocated to the channel.

5 A sound source apparatus according to claim 4, wherein the adjusting  
16 device comprises a modifying device that modifies the algorithm to eliminate a  
17 predetermined one of the operation blocks involved in the system so as to  
18 reduce a number of the operation blocks to be loaded into the channel for  
19 adjustment to the condition.

21     6     A sound source apparatus according to claim 4, wherein the adjusting  
22     device operates when the condition indicates that an amplitude envelope of the  
23     waveform attenuates below a predetermined threshold level for compacting the  
24     system so as to reduce the number of the operation blocks.

1 7 A sound source apparatus according to claim 4, wherein the adjusting  
2 device operates when the condition indicates that an output volume of the  
3 musical tone is tuned below a predetermined threshold level for compacting the  
4 system so as to reduce the number of the operation blocks.

5

Sub 657 8 A sound source apparatus according to claim 4, wherein the adjusting  
7 device operates when the condition indicates that one of the operation blocks  
8 declines to become inactive in the system without substantially affecting other  
9 operation blocks of the system for eliminating said one operation block so as to  
10 reduce the number of the operation blocks to be allocated to the channel.

11

12 9 A sound source apparatus according to claim 1, wherein the generating  
13 device comprises a computing device responsive to a variable sampling  
14 frequency for executing the operation blocks to successively compute samples  
15 of the waveform in synchronization to the variable sampling frequency so as to  
16 generate the musical tone, and a controlling device that sets the variable  
17 sampling frequency according to process of computation of the waveform by  
18 the operation blocks.

19

20 10 A sound source apparatus according to claim 1, wherein the generating  
21 device comprises a computing device responsive to a variable sampling  
22 frequency for executing the operation blocks to successively compute samples  
23 of the waveform in synchronization to the variable sampling frequency so as to  
24 generate the musical tone, and a controlling device for adjusting the variable  
25 sampling frequency dependently on a load of computation of the waveform  
26 during the course of generating the musical tone.

1  
2 11 A sound source apparatus according to claim 1, wherein the generating  
3 device comprises a computing device responsive to a variable sampling  
4 frequency for executing the operation blocks to successively compute samples  
5 of the waveform in synchronization to the variable sampling frequency so as to  
6 generate the musical tone, and a controlling device for adjusting the variable  
7 sampling frequency according to result of computation of the samples during  
8 the course of generating the musical tone.

9  
10 ~~12~~ <sup>13.</sup> A sound source apparatus having a software module used to compute  
11 samples of a waveform in response to a sampling frequency for generating a  
12 musical tone according to performance information, the apparatus comprising:

13 a processor device that periodically executes the software module for  
14 successively computing samples of the waveform corresponding to a variable  
15 sampling frequency so as to generate the musical tone;

16 a detector device for detecting a load of computation imposed on the  
17 processor device during the course of generating the musical tone; and

18 a controller device operative according to the detected load for changing  
19 the variable sampling frequency to adjust a rate of computation of the samples.

20 <sup>14.</sup>  
21 ~~13~~ <sup>13</sup> A sound source apparatus according to claim ~~12~~, wherein the controller  
22 device provides a fast sampling frequency when the detected load is relatively  
23 light, and provides a slow sampling frequency when the detected load is  
24 relatively heavy such that the rate of the computation of the samples is reduced  
25 by 1/n where n denotes an integer number.  
26

15.

14

1 ~~14~~ A sound source apparatus according to claim ~~13~~, wherein the processor  
2 device includes a delay device having a memory for imparting a delay to the  
3 waveform to determine a pitch of the musical tone according to the  
4 performance information, the delay device generating a write pointer for  
5 successively writing the samples into addresses of the memory and a read  
6 pointer for successively reading the samples from <sup>addresses</sup> ~~addresses~~ of the memory to  
7 thereby create the delay corresponding to an address gap between the write  
8 pointer and the read pointer, the delay device being responsive to the fast  
9 sampling frequency to increment both of the write pointer and the read pointer  
10 by one address for one sample, otherwise the delay device being responsive to  
11 the slow sampling frequency to increment the write pointer by one address n  
12 times for one sample and to increment the read pointer by n addresses for one  
13 sample.

16.

14

15 ~~15~~ A sound source apparatus according to claim ~~13~~, wherein the processor  
16 device includes a delay device having a pair of memory regions for imparting a  
17 delay to the waveform to determine a pitch of the musical tone according to the  
18 performance information, the delay device successively writing the samples of  
19 the waveform of one <sup>musical</sup> ~~musical~~ tone into addresses of one of the memory regions  
20 and successively reading the samples from addresses of the same memory  
21 region to thereby create the delay, the delay device being operative when said  
22 one musical tone is switched to another musical tone for successively writing  
23 the samples of the waveform of said another <sup>musical</sup> ~~musical~~ tone into addresses of the  
24 other memory region and successively reading the samples from addresses of  
25 the same memory region to thereby create the delay while clearing the one  
26 memory region to prepare for a further musical tone.

1 17.  
2 ~~16~~ A sound source apparatus according to claim ~~12~~<sup>13</sup>, wherein the processor  
3 device executes the software module composed of a plurality sub-modules for  
4 successively computing the waveform, the processor device being operative  
5 when one of the sub-modules declines to become inactive without substantially  
6 affecting other sub-modules during computation of the waveform for skipping  
7 execution of said one sub-module.

8 20.  
9 ~~17~~ A sound source apparatus having a software module used to compute  
10 samples of a waveform for generating a musical tone, the apparatus  
11 comprising:

12 a provider device for variably providing a trigger signal at a relatively  
13 slow rate to define a frame period between successive trigger signals, and for  
14 periodically providing a sampling signal at a relatively fast rate such that a  
15 plurality of sampling signals occur within one frame period;

16 a processor device resettable in response to each trigger signal and  
17 operable to periodically execute the software module for successively  
18 computing a number of samples of the waveform corresponding to the  
19 sampling signals within one frame;

20 a detector device for detecting a load of computation imposed on the  
21 processor device during the course of generating the musical tone;

22 a controller device operative according to the detected load for varying  
23 the frame period to adjust the number of the samples computed within one  
24 frame period, and

1           a converter device responsive to each sampling signal for converting  
2   each of the samples into a corresponding analog signal to thereby generate the  
3   musical tones.

4 ~~21.~~  
5 ~~18~~ A sound source apparatus having submodules composed of softwares  
6 used to compute waveforms for generating a plurality of musical tones through  
7 a plurality of channels according to performance information, the apparatus  
8 comprising:

9        setting means for setting an algorithm which determines a module  
10    composed of selective ones of the submodules logically connected to each  
11    other to compute a waveform specific to one of the musical tones;

12           designating means responsive to the performance information for  
13   designating one of the channels to be used for generating said one musical tone;  
14   and

15       generating means for loading the selective submodules into said one  
16   channel and for logically executing the allocated selective submodules  
17   according to the algorithm so as to compute the waveform to thereby generate  
18   said one musical tone through said one channel.

22. 21  
19 A sound source apparatus according to claim 18, wherein the setting  
20 means sets different algorithms which determine different modules  
21 corresponding to different timbres of the musical tones, each of the different  
22 modules being composed of selective ones of the submodules which are  
23 selectively and sequentially connected to each other to compute a waveform  
24 which is specific to a corresponding one of the different timbres.  
25

23.

1 ~~20~~<sup>21</sup> A sound source apparatus according to claim ~~18~~<sup>21</sup>, wherein the setting  
2 means comprises adjusting means operative dependently on a condition during  
3 the course of generating the musical tone for adjusting a number of the  
4 submodules to be loaded into the channel.

24.

5 ~~21~~<sup>21</sup> A sound source apparatus according to claim ~~18~~<sup>21</sup>, wherein the adjusting  
6 means operates when the condition indicates that an amplitude envelope of the  
7 waveform attenuates below a predetermined threshold level for compacting the  
8 module so as to reduce the number of the submodules.  
9

25.

10 ~~22~~<sup>21</sup> A sound source apparatus according to claim ~~18~~<sup>21</sup>, wherein the adjusting  
11 means operates when the condition indicates that an output volume of the  
12 musical tone is tuned below a predetermined threshold level for compacting the  
13 module so as to reduce the number of the submodules.  
14

26.

15 ~~23~~<sup>21</sup> A sound source apparatus according to claim ~~18~~<sup>21</sup>, wherein the adjusting  
16 means operates when the condition indicates that one of the submodules loses  
17 contribution to computation of the waveform without substantially affecting  
18 other submodules for eliminating said one submodule so as to reduce the  
19 number of the submodules to be loaded into the channel.  
20

27.

21 ~~24~~<sup>24</sup> A sound source apparatus having a software module used to compute  
22 samples of a waveform in response to a sampling frequency for generating a  
23 musical tone according to performance information, the apparatus comprising:  
24



1 processor means to periodically execute the software module for  
2 successively computing samples of the waveform corresponding to a variable  
3 sampling frequency so as to generate the musical tone;

4 detector means for detecting a load of computation imposed on the  
5 processor means during the course of generating the musical tone; and

6 controller means operative according to the detected load for changing  
7 the variable sampling frequency to adjust a rate of computation of the samples.

8 <sup>28.</sup>  
9 ~~25~~ A sound source apparatus according to claim <sup>27</sup>~~24~~, wherein the controller  
10 means provides a fast sampling frequency when the detected load is relatively  
11 light, and provides a slow sampling frequency when the detected load is  
12 relatively heavy such that the rate of the computation of the samples is reduced  
13 by  $1/n$  where  $n$  denotes an integer number.

14 <sup>30.</sup>  
15 ~~26~~ A sound source apparatus according to claim <sup>28</sup>~~25~~, wherein the processor  
16 means includes delay means having a memory for imparting a delay to the  
17 waveform to determine a pitch of the musical tone according to the  
18 performance information, the delay means generating a write pointer for  
19 successively writing the samples into addresses of the memory and a read  
20 pointer for successively reading the samples from <sup>addresses</sup>~~addresses~~ of the memory to  
21 thereby create the delay corresponding to an address interval between the write  
22 pointer and the read pointer, the delay means being responsive to the fast  
23 sampling frequency to increment both of the write pointer and the read pointer  
24 by every one address for every one sample, otherwise the delay means being  
25 responsive to the slow sampling frequency to increment the write pointer by  
26 every one address at  $n$  times for repeatedly writing one sample into consecutive

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1 n addresses and to skip the read pointer by consecutive n addresses for reading  
2 one sample.

3 31.

4 ~~21~~ A sound source apparatus having a software module used to compute  
5 samples of a waveform for generating a musical tone, the apparatus  
6 comprising:

7        provider means for variably providing a trigger signal at a relatively slow  
8   rate to define a frame period between successive trigger signals, and for  
9   periodically providing a sampling signal at a relatively fast rate such that a  
10   plurality of sampling signals occur within one frame period;

processor means resettable in response to each trigger signal and operable based on each sampling signal to periodically execute the software module for successively computing a number of samples of the waveform within one frame period;

15 detector means for detecting a load of computation imposed on the  
16 processor means during the course of generating the musical tone;

17 controller means operative according to the detected load for varying the  
18 frame period to adjust the number of the samples computed within one frame  
19 period, and

20 converter means responsive to each sampling signal for converting each  
21 of the samples into a corresponding analog signal to thereby generate the  
22 musical tones.

23 32.

~~28~~ A sound source apparatus having a software module used to compute  
samples of a waveform for generating a musical tone, the apparatus  
comprising:

1 provider means for periodically providing a trigger signal at a relatively  
2 slow rate to define a frame period between successive trigger signals, and for  
3 periodically providing a sampling signal at a relatively fast rate such that a  
4 plurality of sampling signals occur within one frame period;

5 processor means resettable in response to a trigger signal and operable in  
6 response to each sampling signal to periodically execute the software module  
7 for successively computing a number of samples of the waveform within one  
8 frame period; and

9 converter means responsive to each sampling signal for converting each  
10 of the samples into a corresponding analog signal to thereby generate the  
11 musical tones, wherein

12 the processor means includes delay means having a pair of memory  
13 regions for imparting a delay to the waveform to determine a pitch of the  
14 musical tone according to the performance information, the delay means  
15 successively writing the samples of the waveform of one <sup>musical</sup> ~~musical~~ tone into  
16 addresses of one of the memory regions and successively reading the samples  
17 from <sup>addresses</sup> ~~addresses~~ of the same memory region to thereby create the delay, the delay  
18 means being operative when the processor means is reset so that said one  
19 musical tone is switched to another musical tone for successively writing the  
20 samples of the waveform of said another <sup>musical</sup> ~~musical~~ tone into addresses of the  
21 other memory region and successively reading the samples from <sup>addresses</sup> ~~addresses~~ of the  
22 same memory region to thereby create the delay while clearing the one memory  
23 region to prepare for a further musical tone.

24 33.

25 <sup>29</sup> A method using submodules composed of softwares to compute  
26 waveforms for generating a plurality of musical tones through a plurality of

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1 channels according to performance information, the method comprising the  
2 steps of:

3 setting an algorithm which determines a module composed of selective  
4 ones of the submodules logically connected to each other to compute a  
5 waveform specific to one of the musical tones;

6 designating one of the channels to be used for generating said one  
7 musical tone in response to the performance information;

8 loading the selective submodules into said one channel; and

9 logically executing the loaded selective submodules according to the  
10 algorithm so as to compute the waveform to thereby generate said one musical  
11 tone through said one channel.

12 ~~34.~~ <sup>33</sup>  
13 ~~30~~ A method according to claim ~~29~~, wherein the step of setting sets different  
14 algorithms which determine different modules corresponding to different  
15 timbres of the musical tones, each of the different modules being composed of  
16 selective ones of the submodules which are selectively and sequentially  
17 connected to each other to compute a waveform which is specific to a  
18 corresponding one of the different timbres.

19 ~~35.~~ <sup>33</sup>  
20 ~~31~~ A method according to claim ~~29~~, wherein the step of setting comprises  
21 adjusting a number of the submodules to be loaded into the channel  
22 dependently on a condition during the course of generating the musical tone.

23 ~~36.~~ <sup>35</sup>  
24 ~~32~~ A method according to claim ~~31~~, wherein the step of adjusting comprises  
25 compacting the module so as to reduce the number of the submodules when the

1 condition indicates that an amplitude envelope of the waveform attenuates  
2 below a predetermined threshold level.

3 ~~37.~~ <sup>35</sup>  
4 ~~38~~ A method according to claim ~~31~~, wherein the step of adjusting comprises  
5 compacting the module so as to reduce the number of the submodules when the  
6 condition indicates that an output volume of the musical tone is tuned below a  
7 predetermined threshold level.

8

9 ~~Sub 37~~ <sup>34</sup> A method according to claim 31, wherein the step of adjusting comprises  
10 eliminating one submodule so as to reduce the number of the submodules to be  
11 loaded into the channel when the condition indicates that said one submodule  
12 loses contribution to computation of the waveform without substantially  
13 affecting other submodules.

14 ~~39.~~  
15 ~~38~~ A method using a hardware processor and a software module to compute  
16 samples of a waveform in response to a sampling frequency for generating a  
17 musical tone according to performance information, the method comprising the  
18 steps of:

19 periodically operating the hardware processor to execute the software  
20 module for successively computing samples of the waveform corresponding to  
21 a variable sampling frequency so as to generate the musical tone;

22 detecting a load of computation imposed on the hardware processor  
23 during the course of generating the musical tone; and

24 changing the variable sampling frequency according to the detected load  
25 to adjust a rate of computation of the samples.

26

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1 ~~36~~ A method according to claim ~~35~~, wherein the step of changing provides a  
2 fast sampling frequency when the detected load is relatively light, and provides  
3 a slow sampling frequency when the detected load is relatively heavy.

41.

4  
5 ~~37~~ A method using a hardware processor having a software module used to  
6 compute samples of a waveform for generating a musical tone, the method  
7 comprising the steps of:

8 variably providing a trigger signal at a relatively slow rate to define a  
9 frame period between successive trigger signals;

10 periodically providing a sampling signal at a relatively fast rate such that  
11 a plurality of sampling signals occur within one frame period;

12 operating the hardware processor resettable in response to each trigger  
13 signal and operable based on each sampling signal to periodically execute the  
14 software module for successively computing a number of samples of the  
15 waveform within one frame period;

16 detecting a load of computation imposed on the software processor  
17 during the course of generating the musical tone;

18 varying the frame period according to the detected load to adjust the  
19 number of the samples computed within one frame period, and

20 converting each of the samples into a corresponding analog signal in  
21 response to each sampling signal to thereby generate the musical tones.

42.

22  
23 ~~38~~ A method using a hardware processor having a software module used to  
24 compute samples of a waveform for generating a musical tone, the method  
25 comprising the steps of:

periodically providing a trigger signal at a relatively slow rate to define a frame period between successive trigger signals;

periodically providing a sampling signal at a relatively fast rate such that a plurality of sampling signals occur within one frame period;

operating the hardware processor resettable in response to a trigger signal and operable based on each sampling signal to periodically execute the software module for successively computing a number of samples of the waveform within one frame period; and

converting each of the samples into a corresponding analog signal in response to each sampling signal to thereby generate the musical tones, wherein

the step of operating includes delay step using a pair of memory regions for imparting a delay to the waveform to determine a pitch of the musical tone according to the performance information, the delay step successively writing the samples of the waveform of one <sup>musical</sup> musical tone into addresses of one of the memory regions and successively <sup>↑</sup> reading the samples from <sup>addresses</sup> addresses of the same memory region to thereby create the delay, the delay step responding when the hardware processor is reset so that said one musical tone is switched to another musical tone for successively writing the samples of the waveform of said another <sup>musical</sup> musical tone into addresses of the other memory region and successively reading the samples from <sup>addresses</sup> addresses of the same memory region to thereby create the delay while clearing the one memory region to prepare for a further musical tone.

39 A machine readable media for use in a processor machine including a  
CPU, said media containing program instructions executable by said CPU for

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1 causing the processor machine having submodules composed of softwares to  
2 compute waveforms for performing operation of generating a plurality of  
3 musical tones through a plurality of channels according to performance  
4 information, wherein the operation comprises the steps of:

5        setting an algorithm which determines a module composed of selective  
6 ones of the submodules logically connected to each other to compute a  
7 waveform specific to one of the musical tones;

8        designating one of the channels to be used for generating said one  
9 musical tone in response to the performance information;

10       loading the selective submodules into said one channel; and

11       logically executing the loaded selective submodules according to the  
12 algorithm so as to compute the waveform to thereby generate said one musical  
13 tone through said one channel.

14       <sup>44.</sup>  
15 ~~40~~ A machine readable media according to claim <sup>43</sup>~~39~~, wherein the step of  
16 setting sets different algorithms which determine different modules  
17 corresponding to different timbres of the musical tones, each of the different  
18 modules being composed of selective ones of the submodules which are  
19 selectively and sequentially connected to each other to compute a waveform  
20 which is specific to a corresponding one of the different timbres.

21       <sup>45.</sup>  
22 ~~41~~ A machine readable media according to claim <sup>43</sup>~~39~~, wherein the step of  
23 setting comprises adjusting a number of the submodules to be loaded into the  
24 channel dependently on a condition during the course of generating the musical  
25 tone.

26



46.

1 ~~42~~ A machine readable media according to claim ~~41~~<sup>45</sup>, wherein the step of  
2 adjusting comprises compacting the module so as to reduce the number of the  
3 submodules when the condition indicates that an amplitude envelope of the  
4 waveform attenuates below a predetermined threshold level.

5 47.

6 ~~43~~ A machine readable media according to claim ~~41~~<sup>45</sup>, wherein the step of  
7 adjusting comprises compacting the module so as to reduce the number of the  
8 submodules when the condition indicates that an output volume of the musical  
9 tone is tuned below a predetermined threshold level.

10

6

11 ~~44~~ A machine readable media according to claim 41, wherein the step of  
12 adjusting comprises eliminating one submodule so as to reduce the number of  
13 the submodules to be loaded into the channel when the condition indicates that  
14 said one submodule loses contribution to computation of the waveform without  
15 substantially affecting other submodules.

16 49.

17 ~~45~~ A machine readable media for use in a processor machine including a  
18 CPU, said media containing program instructions executable by said CPU for  
19 causing the processor machine having a software module to compute samples  
20 of a waveform in response to a sampling frequency for performing operation of  
21 generating a musical tone according to performance information, wherein the  
22 operation comprises the steps of:

23 periodically operating the processor machine to execute the software  
24 module for successively computing samples of the waveform corresponding to  
25 a variable sampling frequency so as to generate the musical tone;

1 detecting a load of computation imposed on the processor machine  
2 during the course of generating the musical tone; and  
3 changing the variable sampling frequency according to the detected load  
4 to adjust a rate of computation of the samples.

5 50.  
6 ~~46~~ A machine readable media according to claim ~~45~~<sup>49</sup>, wherein the step of  
7 changing provides a fast sampling frequency when the detected load is  
8 relatively light, and provides a slow sampling frequency when the detected load  
9 is relatively heavy.

10 51.  
11 ~~47~~ A machine readable media for use in a processor machine including a  
12 CPU, said media containing program instructions executable by said CPU for  
13 causing the processor machine having a software module used to compute  
14 samples of a waveform for performing operation of generating a musical tone,  
15 wherein the operation comprises the steps of:

16 variably providing a trigger signal at a relatively slow rate to define a  
17 frame period between successive trigger signals;

18 periodically providing a sampling signal at a relatively fast rate such that  
19 a plurality of sampling signals occur within one frame period;

20 operating the processor machine resettable in response to each trigger  
21 signal and operable based on each sampling signal to periodically execute the  
22 software module for successively computing a number of samples of the  
23 waveform within one frame period;

24 detecting a load of computation imposed on the processor machine  
25 during the course of generating the musical tone;

1 varying the frame period according to the detected load to adjust the  
2 number of the samples computed within one frame period, and  
3 converting each of the samples into a corresponding analog signal in  
4 response to each sampling signal to thereby generate the musical tones.

5 52.  
6 48 A machine readable media for use in a processor machine including a  
7 CPU, said media containing program instructions executable by said CPU for  
8 causing the processor machine having a software module used to compute  
9 samples of a waveform for performing operation of generating a musical tone,  
10 wherein the operation comprises the steps of:

11 periodically providing a trigger signal at a relatively slow rate to define a  
12 frame period between successive trigger signals;

13 periodically providing a sampling signal at a relatively fast rate such that  
14 a plurality of sampling signals occur within one frame period;

15 operating the processor machine resettable in response to a trigger signal  
16 and operable based on each sampling signal to periodically execute the  
17 software module for successively computing a number of samples of the  
18 waveform within one frame; and

19 converting each of the samples into a corresponding analog signal in  
20 response to each sampling signal to thereby generate the musical tones,  
21 wherein

22 the step of operating includes delaying step using a pair of memory  
23 regions for imparting a delay to the waveform to determine a pitch of the  
24 musical tone according to the performance information, the delay step  
25 successively writing the samples of the waveform of one musical tone into  
26 addresses of one of the memory regions and successively reading the samples

a 1 from <sup>addresses</sup> ~~addresses~~ of the same memory region to thereby create the delay, the delay  
2 step responding when the processor machine is reset so that said one musical  
3 tone is switched to another musical tone for successively writing the samples of  
a 4 the waveform of said another <sup>musical</sup> ~~musical~~ tone into addresses of the other memory  
c 5 region and successively reading the samples from <sup>addresses</sup> ~~addresses~~ of the same memory  
6 region to thereby create the delay while clearing the one memory region to  
7 prepare for a further musical tone.

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